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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,287	01/16/2004	Souichi Toyama	029116.53150US	5151
23911	7590	06/14/2005	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			KHATRI, PRANAV V	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,287

Applicant(s)

TOYAMA ET AL.

Examiner

Pranav V. Khatri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5, 6 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 3, 4/2, 4/3, 4/3/2 is/are allowed.
- 6) ☒ Claim(s) 1, 4/1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because figure 1 fails to label the boxes which identifies the part, for example box 32 should be labeled microprocessor. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Objections

2. Claim 5 and 6 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim is dependent on a multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim 5 and 6 not been further treated on the merits.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Tohyama et al. (US Patent No. 6,703,603).

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Tohyama et al. discloses an optical scanner (Fig. 6 and Col 3 Line 44) comprising: a mirror (Fig. 6 Numeral 11) fixed to a rotating shaft (Fig. 6 Numeral 12); feed back control means (Fig. 6) for controlling a detected angle (Fig. 6 Numeral 22) of said mirror so that said angle coincides with a desired value (Col 3 Lines 59-65 and Col 13 Lines 7-12); and corrected target trajectory generating means for correcting a target trajectory (Col 8 Lines 47-53) so as to cancel a gain characteristic

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and a phase characteristic of said feedback control means with respect to a specific frequency (Col 12 Lines 20-25 and Fig 6); wherein an output signal of said corrected target trajectory generating means is supplied to said feedback control means as said desired value (Fig. 6 Numeral 22, and 17e).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinauer et al. (US Patent No. 6,850,812) in view of Bridgelall et al. (US Patent No. 5,907,146).

Regarding claim 1, Dinauer et al. discloses an optical scanner comprising a mirror fixed to a rotating shaft (see Dinauer et al. Col 12 Lines 13-18); feedback control means for controlling a detected angle of said mirror so that said angle coincides with a desired value (see Dinauer et al. Col 12 Lines 28-35, Col 3 Lines 7-15, and Fig 2); and corrected target trajectory generating means for correcting a target trajectory (see Dinauer et al. Col 7 Lines 30-45), and wherein an output signal of said corrected target trajectory generating means is supplied to said feedback control means as said desired value (Fig 7B-1). Dinauer et al. lacks the teaching of a means for correcting a target

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trajectory so as to cancel a gain characteristic and a phase characteristic of said feedback control means with respect to a specific frequency. Bridgelall et al. teaches a means for correcting a target trajectory (see Bridgelall et al. Col 6 Line 15-24), but does not explicitly define that the means will cancel a gain characteristic and a phase characteristic of said feedback control means with respect to a specific frequency. Furthermore, canceling the gain and phase characteristics can be achieved in feedback, but it is not explicitly described in the reference. In addition, corrected trajectory generating means for correcting a target trajectory so as to cancel a gain characteristic and a phase characteristic of said feedback control means with respect to a specific frequency is intended use and it does not have patentable weight because this a product claims. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to include a Dinauer et al. optical scanner with a Bridgelall et al. scanning system which has a corrected target trajectory means because the combination of Dinauer et al. and Bridgelall et al. reference would allow limiting errors in target trajectory and would able to have a more accurate target trajectory.

Regarding claim 4/1, Dinauer et al. discloses the claimed invention as set forth above. Dinauer et al. lacks the teaching wherein said correct target trajectory generating means is inverse characteristic filter means for performing a filter operation having inverse characteristics of said gain characteristic and said phase characteristic estimated by said frequency characteristic estimating means. Bridgelall et al. teaches the uses wherein said correct target trajectory generating means is inverse characteristic filter means for performing a filter operation having inverse

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characteristics of said gain characteristic and said phase characteristic estimated by said frequency characteristic estimating means (see Bridgelall et al. Col. 6 Lines 46-50 and Col 12 Lines 57-59). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the inverse characteristic filter means by Bridgelall et al. with Dinauer et al. optical scanner because it is important to have a scanning system that has a inverse characteristic filter which simplifies the generation of a feedback signal for error correction purposes.

Allowable Subject Matter

6. Claims 2, 3, 4/2, 4/3, and 4/3/2 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: claims are allowable at least for the reason that the prior art does not teach or reasonably suggest the wherein said gain characteristic and said phase characteristic of said feedback control means with respect to said specific frequency are estimated by said frequency characteristic estimating means. Dinauer et al. and Bridgelall et al. discloses all as set forth in the claimed combination except wherein said gain characteristic and said phase characteristic of said feedback control means with respect to said specific frequency are estimated by said frequency characteristic estimating means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pranav V. Khatri whose telephone number is 571-272-8311. The examiner can normally be reached on M-F, 8:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Pranav Khatri
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EUNCHA P. CHERRY
PRIMARY EXAMINER